

**THE LAST TRANSIT OF VENUS.**

**PROGRESS TOWARD COMPLETION OF THE  
RECORDS OF THE EXPEDITIONS TO OB-  
SERVE THE PHENOMENON—THE SUN'S  
DISTANCE.**

*Special Dispatch to the New-York Times.*

WASHINGTON, Dec. 21.—The reduction of the records of the expeditions sent out by the United States to observe the transit of Venus in 1874 is nearly completed, and in a few weeks Prof. Harkness, of the Naval Observatory, will have ready for publication all the data obtained by our Government expeditions. It is not yet determined whether to carry out the calculations to a determination of the sun's distance before publishing the data obtained. It is possible that the example of the British astronomers will be followed, and a statement made of the sun's distance as determined by the American observations alone. Such a result will be only tentative, however, since the sun's distance will finally be determined by a comparison and discussion of all the observations of the expedition sent out by all nations. The placing of the material upon which the final calculations are to rest before the world as soon as possible is desirable, and our mathematicians are anxious to have possession of the materials to be furnished by other nations to discuss in connection with our own. It may be affirmed that the publication of the American data when made will be highly creditable to the scientific men of this country. The measurements of the photographs have led to some original investigations of great value. The observations, while imperfect at some stations by reason of bad weather, are, when taken together, sufficiently complete to give as satisfactory results as was possible. The indications at the present state of the calculations point to a smaller distance than that announced from Great Britain, and it is probable the usually received distance of 91,000,000 miles may be somewhat near the distance as determined by the American photographic observations. The distance found by the British astronomers is based on observations of the time of the four contacts. The whole subject is now in as much doubt as before the transit. But when all the records of all nations have been published, they will be submitted to very severe and learned discussion, and after a time it will be seen whether the sun's distance has yet been accurately determined. It is feared that the observations of Mars, last Summer, which were expected to have been of great value in determining this question, have failed to yield any useful records. The observations were satisfactory in the northern hemisphere, but in the southern there are only three observatories that could have undertaken the work, and it is not certain that either of them attempted it.